

REMARKS

Claims 1-3, 5-23, and 39 were examined and the most recent office action, dated September 8, 2005. All claims stand rejected over various combinations of Bonnet, U.S. Patent No. 5,839,566; Frotriede, U.S. Patent No. 3,742,738; Boyd, U.S. Patent No. 6,208,908; and Wehrung, U.S. Patent Publication No. 2001/0023377. In view of the claim amendments and arguments presented herein applicants respectfully request a Notice of Allowance.

Claim 1 is Allowable.

Applicant requests the withdrawal of the rejection to claim 1 under 35 U.S.C. § 103(a) as obvious over Bonnet in view of the Frotriede, and as separately rejected under 35 U.S.C. § 103(a) as obvious over Boyd. Claim 1 has been amended to recite a dumping station including, in part, a releasable latch selectively securing the bin in the pick mode, wherein upon the latch releasing the bin, the bin automatically switches from the pick mode to the dump mode under the force of gravity and rotates about an axis. Claim 1 further recites that the center of gravity of the bin is laterally offset from the axis of rotation toward the discharge end.

Bonnet fails to disclose a latch that selectively secures the tray 25 in the pick mode. Bonnet discloses a system in which trays 25 are disposed on a conveyor belt 12. As shown in Fig. 1, the trays 25 have a pick mode where the tray is disposed flat against the conveyor belt 12, and a dump mode where the trays are pushed upward on one side or the other. In the pick mode, the tray simply sits on top of the conveyor belt 12. Bonnet does not disclose any latch that positively secures the tray in the pick mode at all. To switch from pick mode to dump mode, an actuator 50 pushes up on the tray 25. Bonnet further fails to disclose a latch that releases the tray so that the tray automatically switches to the dump mode under the force of gravity. Thus, the functioning of the machine described in Bonnet is exactly opposite to that claimed.

The Office Action argues that the biasing elements (43, 50, 60, 68, 69) are a latch. This is incorrect, because the biasing elements do not engage and secure the trays 25 in the pick mode. Further, the biasing elements do not release the trays so that the trays switch from the pick mode to the dump mode. While the spring 43 tends to bias the tray to the pick

mode, it does not secure the tray in the pick mode, because the trays all move from the pick mode to the dump mode while the spring is engaged.

Frotriede was only cited for the teaching of a tiltable bin mechanism 14. Frotriede likewise fails to disclose a latch that selectively secures the bin in a pick mode. Accordingly, this rejection must be withdrawn.

Likewise, Boyd fails to disclose a releasable latch selectively securing a bin. Boyd simply discloses no latch that selectively engages and secures the bin 12 in a pick mode, and releases the bin 12 so that gravity forces the bin 12 into a dump mode by rotating about an axis. Even if the door 33 is argued to read on the bin (which it cannot), the door 33 is opened and closed by a door operator 52. The door operator is a complex mechanical linkage system including an input link 56, a coupler 58, an and output link 60. The door operator linkage system 52 maintains constant control of the retractable door 33, both opening and closing the door 33. The linkage system 52 does not release the door 33 such that gravity automatically forces the bin from pick mode to dump mode. Accordingly, because Boyd fails to disclose the claimed latch that selectively secures the bin in the pick mode and releases the bin, claim 1 is novel over Boyd.

Wehrung only discloses control system architecture and fails to disclose structural elements a bin or a latch in any regard.

Claim 1 is further non-obvious over the cited references. The claimed latch positively secures the bin in the pick mode against the force of gravity. The bin is balanced such that when the latch releases the bin, gravity forces the bin to the dump mode as the bin rotates about an axis. There is simply no suggestion within the cited references for this structure. Bonnet has no use for a latch while the trays 25 are in pick mode, because the trays simply sit on the conveyor. The addition of the claimed latch would serve no purpose.

Boyd teaches directly away from a releasable latch for the bin 12, because the bin 12 does not rotate at all. Further, the linkage system controls the door 33 over the entirety of its movement. Boyd teaches that the open position of the door may be changed to direct the packages being discharged to different locations. Col. 6., lines 57-67. For example, the linkage system can open and hold the door in a slightly open position to direct the packages in a first direction, or fully open the door to direct the packages in a different direction. Accordingly, Boyd teaches away from a latch that releases either the bin 12 or the door 33, and allows gravity to move the bin from the pick mode to the dump mode.

Next none of the cited references discloses a bin that is rotatable about an axis, where the center of gravity is laterally offset from the axis toward the discharge end. Bonnet discloses a tray with an axis of rotation at either foot 32 or foot 33 and a center of gravity in the middle of the tray. In either case, the center of gravity and the discharge end are on opposite sides of the axis of rotation. Boyd fails to disclose a bin rotatable about an axis at all. Instead, the bin 12 of Boyd is stationary while the bottom door 33 falls out.

The combination of this offset center of gravity and the latch allows for a reliable, inexpensive system that can dump its contents onto a conveyor simply by allowing gravity to take effect. The latch releases the bin, and the offset center of gravity allows the bin to rotate about the axis by gravity to dump its contents. This system is much simpler than the highly complex trip mechanism of Bonnet and the linkage system of Boyd. Accordingly, claim 1 is allowable.

Dependent claims 2, 3, and 5-14 are allowable for at least the same reasons. In particular, claim 14 recites that the bin is manually placed in the pick mode. In Boyd, the door 33 is closed by the door operator 52, not manually. In Bonnet, the tray falls back against the conveyor belt automatically by gravity and the spring 43. See col. 6, lines 54-57.

Claim 15 is Allowable.

Claim 15 stands rejected over the same combinations of references as claim 1. Claim 15, as amended, recites a dump station including, in part, a stationary support and a bin hingedly mounted to the stationary support for rotational motion relative to the stationary support. None of the prior art references disclose or suggest this structure.

Bonnet discloses a plurality of trays 25 that are disposed on and transportable by a conveyor belt 12. A feed conveyor 16 delivers packages 17 to the trays 25 at a first location. The conveyor belt 12 transports the trays 25 to a second location where the trays 25 deposit the packages 17 down a chute 88 or 89. The trays 25 of Bonnet are not hingedly mounted to a stationary support. Likewise, the receptacles 12 of Boyd travel along rails 22 from an article dispensing station 102 where they receive articles to pack stations 16 where they unload the articles. The receptacles 12 are not hingedly mounted to a stationary support. Further, the carrier 14 of Frotriede is "supported by a trolley 65 and can move along the rail 62." Col. 3, lines 18-19. Again, Wehrung only discloses control system architecture and

fails to disclose any structural elements of a bin. Accordingly, none of the cited references anticipate claim 15.

Claim 15 is further not suggested by any of the references because all of the references teach away from the claimed subject matter. Boyd, Bonnet and Frotriede all specifically disclose that the tray (or receptacle) should be transportable to receive goods at a first location, transport those goods from the first location to a second location, and dispense the goods at the second location. Accordingly, none of the cited references suggest a bin that is hingedly mounted to a stationary support. Claim 15 is allowable for these reasons. Dependent claims 16-23 are also allowable for at least these reasons.

Claim 39 is Allowable.

Claim 39 stands rejected over Bonnet in view of of Frotriede and further in view of Wehrung. Claim 39 recites, in part, that the collection area comprises a conveyor, and the processor generates a first release signal as a selected area of the conveyor passes the first bin and generates a second release signal as the same selected area of the conveyor passes the second bin.

The office action admits that Bonnet fails to disclose the first and second bins dumping to particular locations on the conveyor, but argues that Wehrung discloses the missing element. However, Wehrung fails to disclose the first and second bins that dispense articles to the same location on a conveyor. Instead, Wehrung discloses a system for manufacturing semiconductor wafers. Each wafer is singularly transported in a container by the conveyor. A tool 46 retrieves individual containers, works on the wafers, and then loads the container back onto the conveyor belt. "Each of the load points 44 is associated with a load port to transfer device (LPTD) that moves a container from the rail (the upstream load zone 52) to the tool 46 for processing and back onto the rail (the downstream load zone 54) when processing is complete. Also, one LPTD can service multiple load points." Page 5, the definition for "the load area". Accordingly, Wehrung fails to disclose that the tool 46 dispenses more than one container onto the same location of the conveyor belt.

Claim 39 is further not suggested by the references. As noted above, neither of Bonnet or Frotriede disclose the noted element. Accordingly, they cannot suggest that element. Further, Wehrung specifically teaches away from two bins dumping articles onto the same location of a conveyor. Wehrung is concerned with the assembly of semiconductor

wafers. “[A]n ACS for a conveyor-based transfer system used in semiconductor manufacturing operations must ensure that the pods of wafers being transferred *never collide...*”. Wehrung, paragraph 8 (emphasis added). Accordingly, there is no suggestion for dumping two articles onto the same location of the conveyor.

Even if the complex device of Wehrung could be modified to run in the same manner as the machine claimed in claim 39, Wehrung does not suggest the elements of claim 39, as outlined above. See MPEP § 2143.01 (“Although a prior art device may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so”). For at least these reasons, claim 39 is allowable.

CONCLUSION

In view of the above amendment, the pending application is in condition for allowance. The fee for a Petition for a One Month Extension of Time is included herewith. If any further fee is due, please charge our Deposit Account No. 13-2855, under Order No. 29488/38131 from which the undersigned is authorized to draw.

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Respectfully submitted,


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